# Wetland Hydrology: Criterion and Assessment

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# Methods of Interpreting Hydrologic Data

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# Mitigation Hydrology

- Conducted a survey of all USACE Regulatory District Offices
- Purpose
  - Help determine what hydrology tools and methods Corps Districts use for wetland mitigation

# Survey Questions

- What standard does the District use to set wetland hydrology for mitigation?
  - ►Why was this standard selected?
- When was this decision implemented?
- Is this the same hydrology requirement as for wetland identification and delineation?
- How is growing season set or determined?
  - ►Why was this method selected?

# Survey Questions

- How is hydrology monitored for wetland mitigation?
  - Why was this method selected?

# Districts


Seattle
Portland
Walla Walla
Omaha
St Paul
Detroit
New England
Buffalo
New York
San Francisco
Rock Island
Chicago
Buffalo
Pittsburgh
Baltimore
Philadelphia
Sacramento
Huntington
Louisville
Kansas City
St Louis
Norfolk
Wilmington
Nashville
Little Rock
Memphis
Los Angeles
Albuquerque
Tulsa
Charleston
Vicksburg
Mobile
Savannah
Ft Worth
New Orleans
Galveston
Jacksonville

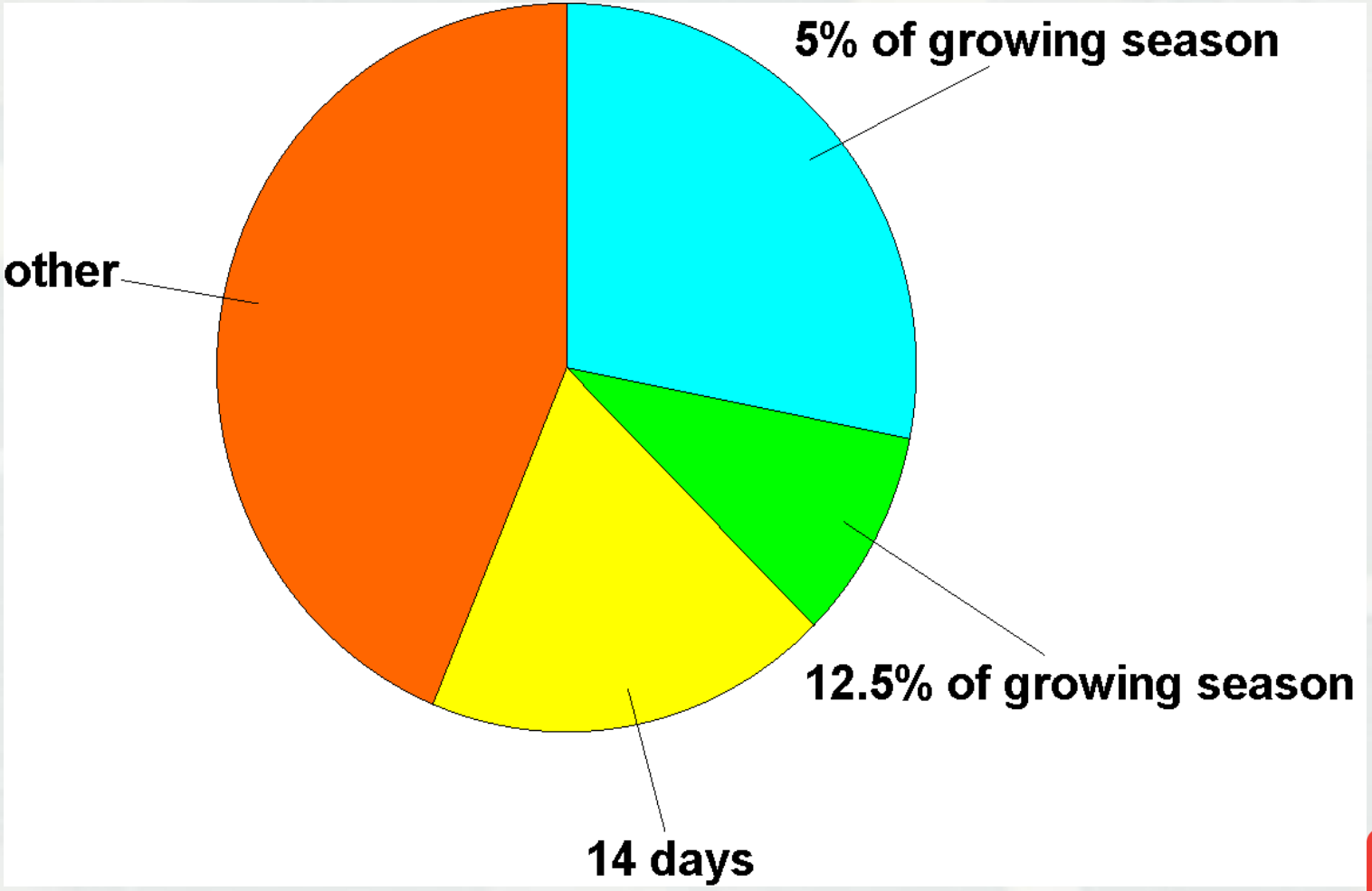
# Results

- 30 of 38  (79 %) Districts responded and least 2 from each Division
- Number of years of experience was typically greater than 10 years
  - ►was at least between 5 and 10 years.
- Not all Districts responded to all questions
- Showed inconsistency within District

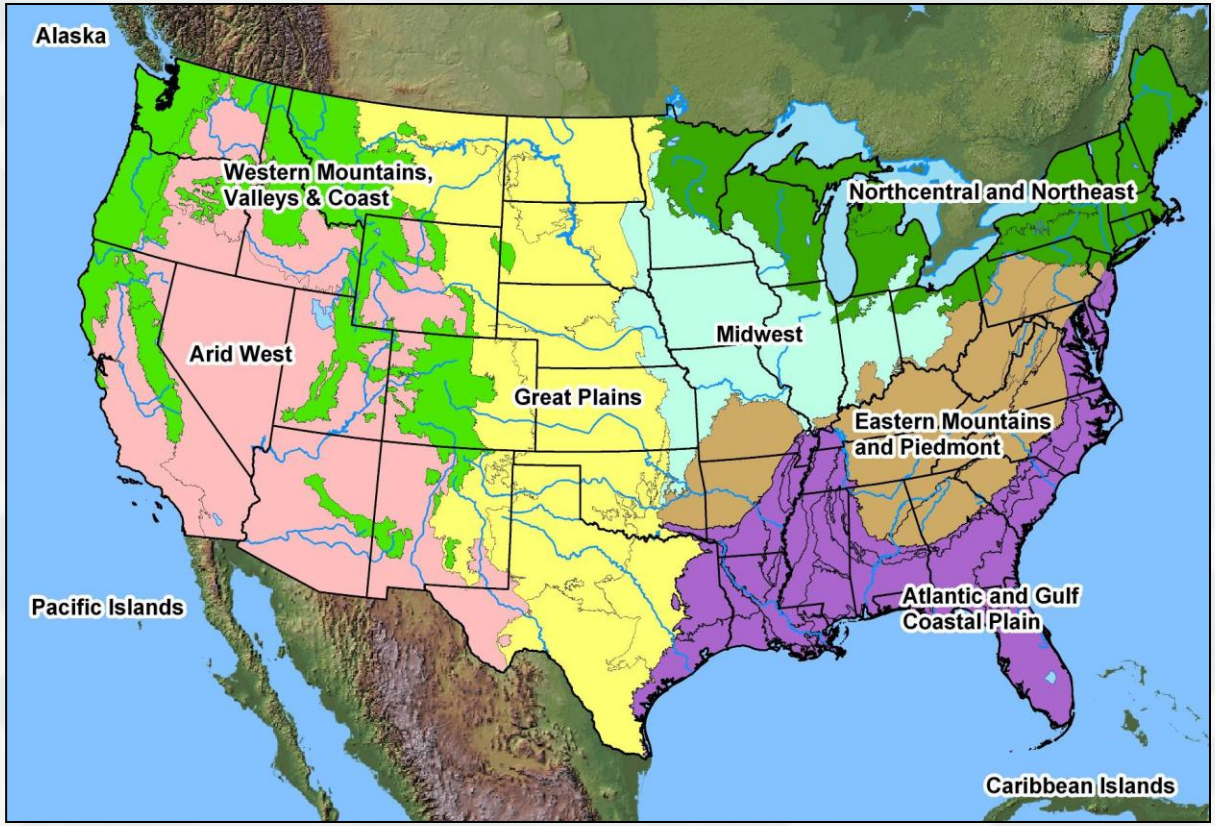
# Question

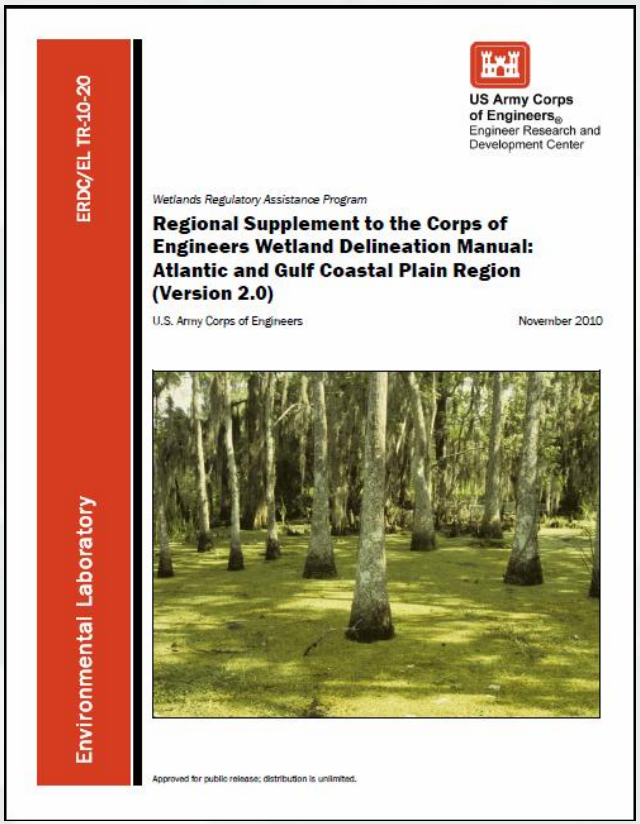
- What standard does the District use to set wetland hydrology for mitigation?
  - 5% of growing season
  - 12.5% of growing season
  - Other

# Wetland Hydrology for Mitigation

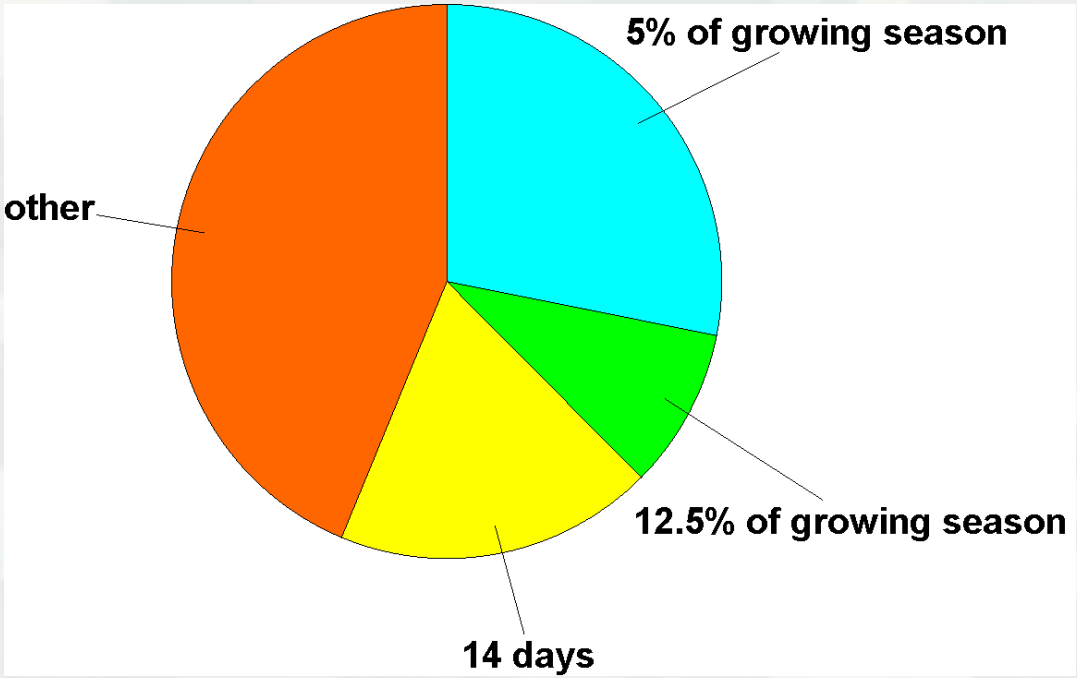


# Regional Supplements



# Wetland Hydrology for Mitigation




- 14 districts selected “Other”
  - 1 District - Vegetation
  - 6 Districts - Variable based on wetland being mitigated

# Question

- When was this decision implemented?
  - 18 – districts before 2000
  - 7 – districts between 2000 and 2007
  - 3 – districts between 2008 and 2010
  - 2 – districts after 2010

# Hydrology Requirement

- Is the same hydrology requirement the same for wetland delineation/identification as for mitigation
  - ►22 Yes (they are the same)
  - ► 8 No (they are **not** the same)

# Question

- How is growing season set or determined?
  - Site soil temperature
  - Air temperature from nearest weather station
  - WETS tables
  - Local vegetative indicators
  - Other

# Determining Growing Season

- 12 - Local vegetation
- 4 - Soil temperature
- 10 - WETS/NRCS tables
- 3 - other
  - Alaska has a remote sensing method
  - Well documented year around growing season / no method necessary

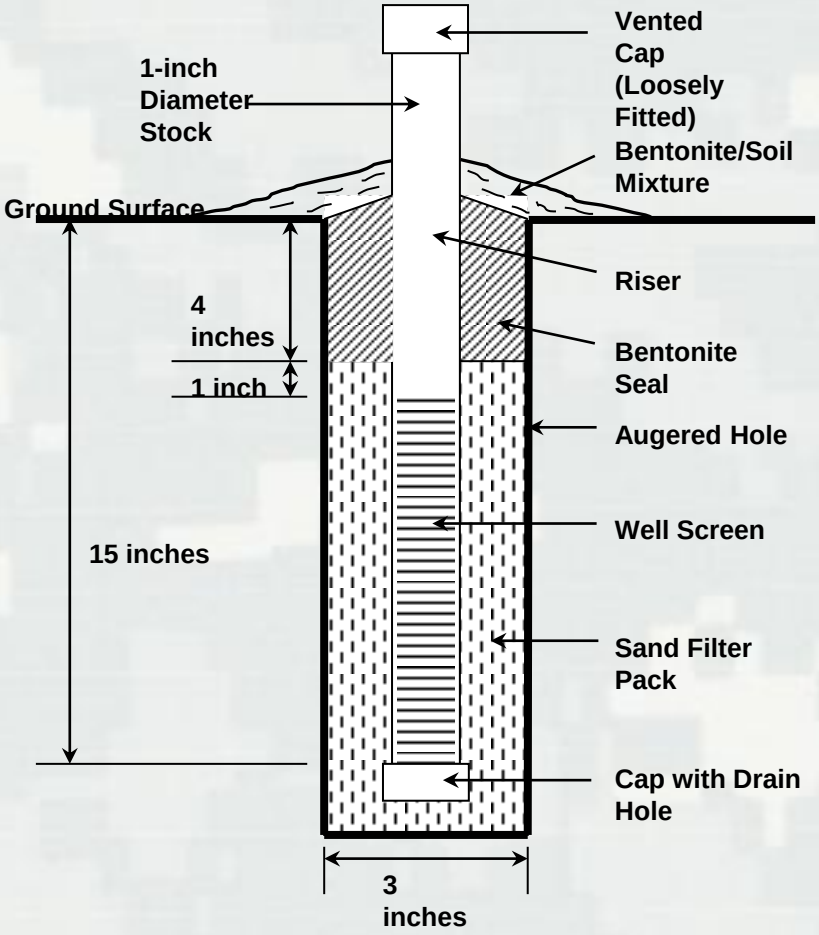
# Question

- How is hydrology monitored for wetland mitigation?

# Hydrology Monitoring

- Methods
  - 13 – Corps Technical Standard
  - 17 – Other
    - 7 – primary and secondary indicators of hydrology
    - 1 – vegetation (dominance of OBL and FACW)
    - 2 – on-site visual inspection
    - 1 – aerial photography
    - 3 – wells
    - 1 – monitoring reports

# Corps Hydrology Technical Standard




- 15 inch well (piezometer)
- Commercially available 1 inch diameter PVC
- Sand filter pack
- Bentonite surface seal

# Summary

- Great deal of variability between Districts
- Variability within CORPS Divisions
- Differences between mitigation and delineation/identification
- Additional training needed on regional supplements